

**WHAT IS CLAIMED IS:**

1. A method of monitoring an automation system, comprising:  
at least one terminal, which is configured to assume at least two state values,  
outputting a message telegram in accordance with the at least two state values;  
a control unit entering the message telegram from the at least one terminal;  
and

the at least one terminal outputting another message telegram only after the  
one terminal has received an acknowledgment signal (Q) from the control unit;

wherein the message telegram contains at least one first transition component  
(E01), which indicates a transition from a first state value to a second state value of  
the at least two state values, and contains at least one second transition component  
(E10), which indicates a transition from the second state value to the first state value  
of the at least two state values.

2. The method according to Claim 1,  
wherein the message telegram has at least one state component (S1, S2); and  
wherein the at least one state component (S1, S2) of the message telegram  
indicates a current state value of the at least two state values of the terminal;

further comprising the control unit comparing the current state value of the  
terminal with a preceding state value of the same terminal; and

in accordance with the result of the comparison and at least one of the first and  
the second transition component (E01, E10), determining a state transition of the at  
least one terminal before the current state value is reached.

3. The method according to Claim 1,  
wherein the message telegram includes concomitant value information; and  
wherein the message telegram has at least one concomitant value information  
component which establishes an association between at least one of the transition  
components and the concomitant value information.

4. The method according to Claim 1, wherein all the components (S1, S2,  
E01, E10) of the at least one message telegram are in binary form.

5. A method for monitoring an automation system, comprising:  
outputting a message telegram representing one of at least two state values of  
a terminal having, variously, at least two state values;  
receiving the message telegram; and  
outputting another message telegram representing one of the at least two state  
values only after receipt of an acknowledgment signal;  
wherein the message telegram contains at least one first transition component,  
which indicates a transition from a first state value to a second state value of the at  
least two state values, and contains at least one second transition component, which  
indicates a transition from the second state value to the first state value of the at least  
two state values.